

Before the
Federal Communications Commission
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)	
)	
Review of the Section 251 Unbundling)	
Obligations of Incumbent Local Exchange)	CC Docket No. 01-338 /
Carriers)	
)	
Implementation of the Local Competition)	
Provisions of the Telecommunications Act)	CC Docket No. 96-98
of 1996)	
)	
Deployment of Wireline Services Offering)	CC Docket No. 98-147
Advanced Telecommunications)	
Capability)	

COMMENTS OF WORLDCOM, INC.

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Table of Contents

I.	Introduction and Summary	1
A.	Only Six Years Have Passed Since the 1996 Act	2
B.	The Long Distance Example Suggests that Six Years is Insufficient to Produce Competition	3
C.	The Path Forward is Through Intramodal Competition	4
D.	WorldCom's Comments Provide the Facts, Economic Analysis and Legal Analysis to Support Adoption of Pro-Competitive Policies	7
1.	Facts and Economic Analysis	7
2.	Argument.....	9
3.	Summary of Requested UNEs.....	10
4.	Supporting Report and Declarations	11
II.	Facts and Economic Analysis	13
A.	Business Services	13
1.	Services and Players.....	13
2.	Incumbent LEC Local Facilities Are a Key Input for All Business Services... ..	14
a)	Incumbent LECs' Networks Dwarf Those of Competitive Carriers.....	15
b)	It Will Take Time for Competitors to Develop Ubiquitous Networks Rivaling those of the Incumbent LECs	19
i.	Lack of Funding From the Capital Markets Has Forced Competitive Carriers to Put their Expansion Plans on Hold.....	21
ii.	Many Assets Remaining from CLEC Bankruptcies Cannot be Put to Competitive Use.....	22
3.	The ILECs' Tactics Have Prevented UNE-based Competition From Taking Hold.....	23
B.	Mass Market Services	24
1.	UNE-P is Critical to Competition for Residential and Small Business Customers.....	25
2.	UNE-P Competition Is Developing as Regulatory Hurdles are Reduced.....	28
3.	No Viable Alternative to UNE-P Exists to Provide Ubiquitous Competition ..	32
a)	End-to-End Facilities-Based Competition is Not Yet Viable	32
b)	UNE-Loops Alone Are Not Sufficient to Ensure Competition for Mass Market Customers	34
c)	Cable Telephony Is Not a Significant Alternative	35
d)	Wireless Is Not a Meaningful Alternative.....	37
C.	Broadband Services.....	38
1.	Business Services	39
a)	DSL Remains The Option of Choice For Business Broadband Users.....	40
b)	Neither Cable Modem Nor Wireless Technologies are an Effective Substitute For Business-Grade DSL	42
i.	Cable Modems.....	42
ii.	Wireless.....	43
2.	Residential Services	44

a) DSL	44
b) Cable Modem	46
c) Wireless and Satellite	47
III. Effective UNE Rules Are Essential to Realizing the Pro-Competitive Goals of the Communications Act.....	47
A. The Commission Should Adhere to the Framework Established in the Act.....	47
1. Little Intermodal Competition For Local Services Exists Today	47
2. UNEs Provide Many Benefits.....	49
3. The Commission Should Continue to Apply the Standards Adopted in the <i>UNE Remand Order</i>	50
4. The Commission Should Reject Attempts to Impose Additional Impediments to Competitive Carriers' Ability to Obtain and Utilize UNEs	52
a) The Commission Should Not Impose Use Restrictions on UNEs	53
b) The Commission Should Not Employ a Service-Specific Impairment Analysis	59
i. The Commission Should Not Create a "Broadband Exception"	60
5. Any Attempt to Impose a "More Granular Statutory Analysis" Must Be Guided By Certain Bedrock Principles	61
6. The Commission Should Not Adopt an Automatic Sunset Date	64
7. Competitors Must Be Able to Lease UNEs at TELRIC-Based Rates.....	65
i. Monopoly Providers Lack the Incentive to Invest in New Facilities or Services	66
ii. Monopoly Providers Lack the Incentive to Set Prices Competitively	67
b) TELRIC provides the Correct Measure of the Incumbent LECs' Costs.....	69
c) Setting UNE Rates at TELRIC Will Not Adversely Affect Funding for Universal Service	71
8. UNEs Play an Important Role in Sustaining Competition for Long-Distance Services	72
B. Effective Unbundling Rules Are Critical to Competition for Business Services ..	74
1. Competitive Carriers' Ability to Serve Business Customers Would Be Impaired Without Unbundled Access to High-Capacity Loops	74
a) DS-1 Loops	74
b) DS-3 Loops	75
c) OC-n Loops	76
2. Competitors Would Be Impaired Without Unbundled Access to Transport	76
3. Incumbent LECs Must Provide Multiplexing in Conjunction With UNE Loops and Transport.....	78
4. Competitors' Ability to Provide the Services They Seek to Offer Would Be Impaired Without Unbundled Access to EELs	79
5. The Commission Should Enforce the Availability of Required UNEs and UNE Combinations	80
C. UNEs And UNE-P Are Critical To Competition For Mass Market Customers ...	81
1. Consumers Benefit from UNE-P Based Competition.....	81
a) There Are No Disadvantages to Making UNE-P Available	82

2.	The FCC Should Expand the Reach of UNE-P Based Competition by Lifting Restrictions on Unbundled Switching.....	83
a)	Small Business and Residential Customers Cannot Be Served without Access to Unbundled Switching	84
b)	Availability of Unbundled Switching Does Not Discourage Facilities Deployment	88
c)	The Commission Should Narrow the Unbundled Switching Exception.....	91
D.	UNEs Are Essential to Promoting Competition for Broadband Services	93
1.	Competition Has Led to the Widespread Deployment of Advanced Services.	93
2.	Unbundling Obligations Have Not Significantly Reduced Incumbent LECs' Incentives to Invest in Broadband Facilities.	97
3.	Competitive DSL Offerings Depend on Access to Unbundled Local Loops	100
a)	The High Frequency Portion of the All-Copper Loop (Line Sharing & Line Splitting).....	102
i.	Line Sharing	103
ii.	Line Splitting.....	104
b)	Line Sharing over Fiber.....	105
c)	Fiber-Fed Loops/SubLoops.....	106
i.	Remote Terminals Are Fast Becoming the New Bottleneck	107
ii.	DLC and NGDLC Platforms.....	108
d)	No Viable Alternatives Exist for Competitors to Access Fiber-Fed Loops	109
i.	Collocation at the Remote Terminal is Not Feasible	109
ii.	Use of Existing Copper is Not a Viable Option	112
e)	ILECs Should Either Be Required to Unbundle the End-to-End NGDLC Loop, Including All its Features, Functions, and Capabilities, or, Alternatively, to Unbundle Both the NGDLC Loop and the DSLAM.	113
i.	ILECs should be required to Unbundle the End-to-End NGDLC Loop.	113
ii.	Remote Terminal NGDLC Functionalities and Electronics Fit Squarely Within the Commission's Existing Definition of the Loop	114
iii.	Alternatively, the Commission Should Find that CLECs Are Impaired Without Access to ILEC RT-Based DSLAMs.....	117
E.	Specific UNEs Not Covered Above.....	119
1.	NID and Inside Wire	119
2.	Signaling Networks and Call-Related Databases.....	120
a)	Signaling Networks.	120
b)	Call-Related Databases.	122
c)	Access to the CNAM Database.....	124
d)	DA Databases.....	127
3.	OSS.....	129
IV.	Conclusion.....	134

Attachments

Technology and Economics of Cross-Platform Competition in Local Telecommunications Market (HAI Report)	Attachment A
Declaration of Edwin A. Fleming	Attachment B
Declaration of Ian T. Graham	Attachment C
Joint Declaration of Tom Stumbaugh and David Reilly	Attachment D
Declaration of Bernard Ku	Attachment E
Joint Declaration of John Gallant and Michael Lehmkuhl	Attachment F
Declaration of Michael Lehmkuhl	Attachment G
Declaration of Sherry Lichtenberg	Attachment H

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COMMENTS OF WORLDCOM, INC.

WorldCom, Inc. (WorldCom), by its attorneys, respectfully submits the following comments in response to the Federal Communications Commission's (FCC's or Commission's) Notice of Proposed Rulemaking (*NPRM*)¹ issued in the above-captioned proceeding.

I. INTRODUCTION AND SUMMARY

The difficult regulatory work required to open local markets has barely begun. The Commission should not use this triennial review as an opportunity to declare victory prematurely and begin to dismantle the foundation upon which local competition will be built. Failure to adopt and vigorously enforce pro-competitive policies, including non-discriminatory access to the full array of unbundled network elements (UNEs), will allow the incumbent local exchange carriers (LECs) to continue their monopoly over local

¹ *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, CC Docket Nos. 01-338, 96-98 and 98-147, Notice of Proposed Rulemaking (Dec. 20, 2001) (*NPRM*).

services, re-monopolize the long distance business, and extend their dominance to the newest industry sector, the Internet.

A. Only Six Years Have Passed Since the 1996 Act

The Telecommunications Act of 1996 became law only six years ago, six years during which the telecommunications landscape has been dominated by Bell Operating Company (BOC) litigation and intransigence. Only a few states have been able to overcome the morass of lawsuits and BOC obduracy to arrive at prices for unbundled network elements that comport with the Act's cost-based standard. In the *Local Competition Order*² and the *UNE Remand Order*³, the Commission established a comprehensive scheme of pro-competitive policies, but in the succeeding years it has gutted some of these policies (*e.g.*, effectively precluding competitive carriers from obtaining loop-transport combinations [EELs]) and has failed to enforce others (*e.g.*, national collocation intervals). A Notice that even suggests that in 2002 the Commission is considering removing elements from the list of national unbundled network elements indicates consummate impatience. The experience of the past six years has shown that the Act's scheme for opening local markets works when it is implemented and enforced. The Commission's duty in this proceeding is to give the Act a realistic opportunity to work throughout the country.

Incumbent LECs today continue to enjoy the advantages of monopoly control over local markets that was created and protected by decades of government-sanctioned legal and economic barriers to entry. Consequently, firms that have survived the very slow progress during the first six years of implementation of the 1996 Act, and the recent

² *Implementation of the Local Competition Provision of the Telecommunications Act of 1996*, First Report and Order, 11 FCC Rcd 15499 (1996) (*Local Competition Order*).

³ *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, Third Report and Order and Fourth Further Notice of Proposed Rulemaking, 15 FCC Rcd 3696 (1999) (*UNE Remand Order*).

precipitous downturn in the telecommunications industry, still need access to the unbundling and other tools that Congress and the Commission have given them to enter and compete in local markets. Indeed, it would be passing strange for the Commission to reward the BOCs for their six-year record of resisting competitive entry into their local markets by relieving them of the obligations that could lead to making those markets competitive.

B. The Long Distance Example Suggests that Six Years is Insufficient to Produce Competition

The development of robust competition for long distance took over twenty years, and the path to long distance competition involved considerably fewer legal and economic barriers than the path to local competition. In 1972, MCI introduced competitive long distance service over its own facilities between Chicago and St. Louis.⁴ From that modest beginning, MCI, supported by a regulatory framework that permitted MCI access to AT&T's nationwide long distance services on a wholesale basis, built a global network. Initial resale of AT&T's services was key to winning MCI enough customers to make build-out of its initially small network economically feasible.

Enabling competition in the long distance business, however, required substantial intervention on the part of the United States Department of Justice, the courts and the Commission. Without the AT&T divestiture in 1984, which eliminated the BOCs' incentive to discriminate in favor of AT&T, it seems inconceivable that today's intensely competitive long distance business would have developed. Non-discriminatory access to exchange access services provided by the BOCs, and regulations that required AT&T to resell its network services, created the environment that made it possible for competitors

⁴ MCI was acquired by WorldCom in 1998.

to build nationwide networks. Ultimately, in 1995, twenty-three years after MCI began providing service, the Commission was able to declare AT&T non-dominant.⁵

Given the much more daunting obstacles to competition for local services than for long distance services, it strains credulity to think that the Commission would be in a position to begin deregulating the incumbent LECs after only six years. Competition for local services raises significantly more difficult issues because the barriers are so high (potentially insurmountable) to entering as an end-to-end facilities-based local carrier. All indications are that there are very significant economies of scale in the loop plant. In addition, even where these economies of scale are not inhibitory, the costs of securing access to buildings and rights of way can preclude efficient entry. Barring a fundamental change in network economics, or an unforeseen technological development, this will continue to be the case indefinitely. The Commission's policy must reflect these realities.

C. The Path Forward is Through Intramodal Competition

Just as development of long distance competition depended on the availability of access to AT&T's services, development of local competition depends on access to incumbent LEC facilities, as unbundled network elements. For the vast majority of customers and services today, there is no alternative to the incumbent LEC networks. Intermodal competition does not today constrain the incumbent LECs' market power, nor will it for the foreseeable future. Competition from satellite and wireless carriers is severely limited by spectrum scarcity and technical disadvantages. The only market in which a competitor can provide service on par with the incumbent LECs is the residential broadband market. But the presence of this single competitor – the cable company – creates a duopoly, not workable competition.

⁵ *Motion of AT&T Corp. to be Reclassified as a Non-Dominant Carrier*, Order, 11 FCC Rcd 3271 (1995).

Competitors' networks still extend to only a small share of the locations of business customers. Even carriers with extensive networks depend on incumbent LEC facilities for last mile facilities, and thus cannot constrain the ILECs' exercise of market power. For the vast majority of mass market voice customers, the choice is either the incumbent LEC or a competitive LEC that relies on UNEs. The cable/BOC duopoly for residential broadband services is likely to result in the same high prices and lack of innovation that resulted from the cellular duopoly. And business users cannot obtain DSL services of sufficient reliability and security from any company except a competitive local exchange carrier.

As a result, if the Commission prematurely denies competitive carriers access to unbundled network elements, the incumbent LECs will retain their local monopolies. As they receive in-region, interLATA authority, moreover, the BOCs will be able to offer packages of local and long distance services that can be offered by no competitive carrier in the absence of the necessary UNEs, and the BOCs will re-monopolize the long distance business. The absence of competition will also enable the BOCs to extend their dominance over access to the Internet, and possibly to the Internet itself, historically the most robustly competitive telecommunications sector. Premature deregulation of incumbent LECs is thus extremely risky, and will represent a radical departure from the goals of the Communications Act.⁶

Intramodal competition, in contrast, if pursued rigorously and vigorously, will result in increased investment as well as meaningful developments in competition, although not overnight. The Commission's unbundling requirements and the threat of competition have spurred significant BOC investment since passage of the 1996 Act. For example, the BOCs invested \$100 billion in 1996-2000, significantly stepping up their

⁶ Communications Act of 1934, as amended by the Telecom Act of 1996, 47 U.S.C. §§ 151 *et seq.* (*The Act*).

level of investment.⁷ Competitive carriers also responded to the framework of the 1996 Act and invested \$56 billion in the same time period.⁸ And even during this period of readily available capital, the CLECs did not come close to extending their networks to enough customers and enough places to challenge the incumbent LECs' bottleneck control over the last mile.

Particularly when capital is tight, as it is in today's economy, competitive carriers are required to show a stable and growing revenue stream in order to raise money to build out their networks. If there is any lesson to be learned from the implosion of the competitive LECs, it is that any competitive company that wants to survive for the long term must build its network incrementally as it develops a customer base.

The policies required for competition therefore include ensuring that competitive carriers receive nondiscriminatory access at TELRIC prices to UNEs and UNE combinations, including EELs, UNE-P, and all loop types. If the Commission adopts these policies, and conducts another review in five years, it will likely see that end-user customers have greater choice, lower prices and an opportunity to receive innovative services. The risks of pursuing this approach, moreover, are low. Because companies prefer the control and flexibility that come with owning their own facilities, they can be expected to build, rather than buy, as long as they earn a reasonable return on their investment. Thus, there is little downside, and a large potential upside, if the Commission stays the course and ensures that competitive carriers receive non-discriminatory access to the full range of unbundled network elements.

⁷ See ARMIS Report 43-07 (1996-2000).

⁸ *The State of Local Competition 2001*, The Association for Local Telecommunications Services (February 2001) at p. 20.

D. WorldCom's Comments Provide the Facts, Economic Analysis and Legal Analysis to Support Adoption of Pro-Competitive Policies

Substantively, these comments are divided into two sections. Section II presents the relevant facts and economic analysis regarding the state of competition for business, residential and broadband services. Section III describes the standard for impairment, and the results of the application of that standard for those UNEs and combinations needed to provide business, residential, and broadband services.

1. Facts and Economic Analysis

Business. Although competitive LECs have had some success in serving business customers, the competitive sector still has such a small share of the business market that non-incumbent LECs are irrelevant for purposes of market analysis.⁹ Moreover, even competitive carriers with extensive networks depend on incumbent LEC facilities. Cable, fixed wireless, and competitive fiber facilities provide links to a limited number of business customers today. Although new entrants use competitive fiber facilities, to the extent possible, to provide service to business customers, particularly multi-location customers, competitive carriers often must rely on the incumbent LECs for the provision of "last-mile" facilities, as well as inter-office transport. Competitive carriers connect to only a fraction of the millions of buildings and other commercial locations served by incumbent LECs. Competitive carriers build out to customers where it is economically feasible to do so, but with today's technology, as a general matter, even when the customer is located near an existing fiber ring, it is not economically viable to extend fiber to a building unless customers in that building commit to purchasing at least three DS-3 circuits. Therefore, it is highly unlikely that any company other than the incumbent LECs will reach every building in the United States.

⁹ See, e.g., Public Notice, *Common Carrier, International and Wireless Bureaus Modify WorldCom-Intermedia Merger Conditions* (Nov. 20, 2001) at 2.

Mass Market. For the vast majority of mass market voice service customers, the choice is either the incumbent LEC or a competitive LEC that relies on UNEs from incumbents to offer service. WorldCom has been able to enter certain parts of states where the UNE pricing allows the company to compete against the BOCs by offering a premium product. A small, specialized set of customers, representing approximately two percent of U.S. households, use mobile wireless service (PCS) as their primary voice service. The amount of spectrum available for PCS service is limited, however, and this, combined with higher prices and a signal of poorer quality than for comparable landline service, means that the availability of PCS cannot discipline the local exchange market. Similarly, fewer than two percent of the nation's small business and residential lines are served by cable telephony.

Broadband. Some residential customers have a choice of two broadband options: incumbent LEC DSL or cable modem service. The Commission's experience with cellular duopoly demonstrates, however, that two competitors are not enough to produce the benefits normally associated with robust competition, specifically innovation and lower prices. Competitive LECs with access to efficiently priced UNEs can strengthen the incentives of cable providers and incumbent LECs to foster the widespread deployment of broadband services. Furthermore, not all residential customers have a choice of even two providers, and very few small business customers have a choice of even one broadband provider. WorldCom offers DSL to medium-sized and large businesses with multiple locations out of a small number of wire centers. But to the extent that neither the incumbent LEC nor the CLECs offer business-grade DSL, business customers have no choice but to buy overpriced special access service or do without broadband service entirely.

2. Argument

Section III argues that the Commission should continue to adhere to the legal framework established in the Act and the standards for impairment adopted in the *UNE Remand Order*. In addition, the comments explain why the Commission should reject attempts to impose additional limits on the ability of competitive LECs to obtain and utilize UNEs. Specifically, the Commission should not: (1) adopt a service-specific impairment analysis; (2) impose use restrictions; (3) engage in a “granular” analysis by geographic market; (4) adopt an automatic sunset provision; or (5) establish unbundling requirements that depend on the date of deployment or the technology (*e.g.*, copper or fiber). Section III also confirms that TELRIC continues to be the proper measure of cost for purposes of setting UNE rates and addresses the effect of the Commission’s unbundling rules on other issues, including universal service and long distance competition. Section III then applies the Commission’s impairment standard to those UNEs and combinations needed to provide business, residential, and broadband services.

Business. Competitors will be impaired in their ability to serve business customers without unbundled access to high-capacity loops and transport, including multiplexing functionalities. Incumbent LECs must also be required to provide access to the loop and transport combination known as the EEL. In addition, the Commission must act to ensure that incumbent LECs actually make these UNEs and UNE combinations available. At a minimum, the Commission should expressly clarify that “co-mingling” of services ordered out of interstate and intrastate tariffs and interconnection agreements is permissible, and define the limited circumstances under which it is legitimate for an incumbent LEC to reject a UNE order based on a claim that there is “no facility.”

Mass market. Consumers benefit from UNE-P based competition and there are no disadvantages to the public interest from making UNE-P available. Because competitive carriers are impaired in their ability to serve small business and residential

customers without access to unbundled local switching, the Commission should eliminate – or at least narrow – its existing switching exception. WorldCom demonstrates that doing so will not discourage facilities deployment and will ensure that the many benefits of competition inure to all end users, including residential and small business customers.

Broadband. Competition from competitive LECs and cable companies has been the key spur to broadband deployment by incumbent LECs. As with mass market local services, unbundling has improved, rather than diminished, incumbent LECs' incentives to invest in their broadband infrastructure. Moreover, competitive LECs' DSL offerings depend on unbundled access to UNEs, including loops (both copper and fiber), line sharing, and line splitting. Given the evolution of incumbent LECs' networks toward the increased use of remote terminals, the Commission should also modify its packet switching carve-out to ensure that competitive LECs have unbundled access to DSLAMs in remote terminals.

The final subsection of Section III discusses the remaining UNEs, and explains why they continue to be critical to the provision of competitive telecommunications services. This section demonstrates that competitive LECs will be impaired in their ability to offer telecommunications services without unbundled access to the network interface device and inside wire, signaling networks and call-related databases (including the CNAM database), directory assistance listings, and operation support systems.

3. Summary of Requested UNEs

The list below summarizes the UNEs and UNE combinations that must be provided by incumbent LECs in order for competition to develop. An asterisk indicates a request to modify the Commission's current rules.

UNEs

- Unbundled Loops, including:
 - high-capacity loops such as DS-1, DS-3, and OC-n

- xDSL-capable loops
 - copper and fiber-fed digital loop carrier (DLC) loops/subloops*
 - line sharing
 - line splitting*
- Network Interface Devices and Inside Wire
- Local Switching,* including:
 - packet switching at remote terminals*
- Interoffice Transport
- Signaling Networks and Call-related Databases, including:
 - Calling Name (CNAM) database*
- Operation Support Systems, including:
 - loop qualification information
- Directory Assistance Listings

UNE Combinations

- Enhanced Extended Links (EELs)*
- UNE Platform (UNE-P)

4. Supporting Report and Declarations

In support of its request for unbundled access to these network elements and combinations, WorldCom attaches a report by HAI Consulting, Inc. entitled “The Technology and Economics of Cross-Platform Competition in Local Telecommunications Markets” (*HAI Report*). The *HAI Report* assesses the development of competition since the 1996 Act and the near-term prospects for further facilities-based competition from firms using alternative technology platforms, including cable, wireless, and fiber rings.

In addition, WorldCom is submitting eight factual declarations in support of its comments. Those declarations include:

- *Declaration of Edwin A. Fleming* – Mr. Fleming’s declaration describes the process that WorldCom uses to extend its local network to additional buildings or to additional LEC central offices. It demonstrates the limited circumstances under which such extensions are economically viable today.
- *Declaration of Peter H. Reynolds* – Mr. Reynolds’ declaration, which is being submitted under separate cover subject to the protective order in this proceeding, discusses the extent to which WorldCom is able to provision

loops and transport over its own local network facilities. It shows that, despite multi-billion dollar investments in local network facilities, WorldCom still relies on incumbent LECs to supply the vast majority of the circuits that WorldCom requires to deliver services to its customers.

- *Declaration of Ian T. Graham* – Mr. Graham’s declaration explains WorldCom’s current DSL strategy and its evolution. It demonstrates that WorldCom’s DSL offerings depend on the continued availability of UNEs from incumbent LECs. It also demonstrates that, if WorldCom is denied access to select UNEs necessary for the provision of DSL service, business customers seeking DSL service and independent Internet Service Providers (ISPs) will be deprived of the benefits of high-speed access to data networks and the Internet.
- *Joint Declaration of Tom Stumbaugh and David Reilly* – This joint declaration explains WorldCom’s need to obtain fiber-fed UNE loops from incumbent LECs in order to provide competitive DSL services. It focuses on the role of digital loop carrier (DLC) systems in the continuing evolution of the loop plant and explains that, in order to offer DSL services, WorldCom requires access to all loops provisioned on DLC systems, on “next generation” DLC (NGDLC) systems, on NGDLC systems equipped with Asynchronous Transfer Mode (ATM) capabilities, and on broadband passive optical network systems. Moreover, this declaration explains that CLECs are impaired without access to ILEC DSLAMs located in remote terminals.
- *Declaration of Bernard Ku* – Mr. Ku’s declaration explains that competitive carriers cannot, as a practical matter, self-provision or obtain signaling and call-related databases from third-party vendors. This is the case even where competitive LECs use their own switches.
- *Joint Declaration of John Gallant and Michael Lehmkuhl* – Mr. Gallant and Mr. Lehmkuhl’s declaration describes the Calling Name (CNAM) database, and explains that competitive carriers seeking to maintain their own databases require the ability to download the information contained in the CNAM database in a consolidated form.
- *Declaration of Michael Lehmkuhl* – Mr. Lehmkuhl’s declaration explains that the incumbent LECs control nearly all of the customer listing data that comprise directory assistance listing (DAL) information, and that third-party DAL databases are not as up-to-date as incumbent LEC databases.
- *Declaration of Sherry Lichtenberg* – Ms. Lichtenberg’s declaration describes the continuing need for unbundled access to Operations Support Systems (OSS). It demonstrates that no market or technological changes have occurred

with regard to OSS since the *UNE Remand Order*, and confirms that OSS remains critical to the ability of new entrants to compete in the local market.

II. FACTS AND ECONOMIC ANALYSIS

A. Business Services

1. Services and Players

In assessing impairment, it is important for the Commission to understand the marketplace for local exchange, exchange access, and interexchange services. Here, WorldCom follows the approach taken by the Commission in the *LEC Classification Order*¹⁰ and various merger orders. The FCC has typically identified two distinct markets: a mass market, consisting of residential and small business customers; and a business market, consisting of medium and large business customers.¹¹ The business market includes all voice and data services provided to business customers,¹² including enterprise customers.¹³ Within the business market, the FCC traditionally has examined local exchange and exchange access services separately from interexchange services.

As explained below, the incumbent LECs are the dominant providers of local exchange and exchange access services sold to business customers.¹⁴ Interexchange

¹⁰ *Regulatory Treatment of LEC Provisioning of Interexchange Services Originating in the LEC's Local Exchange Area*, 12 FCC Rcd 15756 (1997) (*LEC Classification Order*) at ¶ 26 (the 1992 Merger Guidelines provide the proper analytical framework for defining relevant markets in order to assess market power).

¹¹ *Application of WorldCom, Inc. and MCI Communications Corporation for Transfer of Control of MCI Communications Corporation to WorldCom, Inc.*, 13 FCC Rcd 18025 (1998) at ¶ 24 (*MCI/WorldCom Merger Order*).

¹² The FCC has declined to separate the larger business market into distinct voice and data markets. *Id.* at ¶¶ 25-27.

¹³ Enterprise customers typically are businesses with multiple locations. These customers seek a single provider capable of serving all of their locations (sometimes throughout a region, or throughout the country) allowing for complete integration of all telecommunications (voice and data) services.

¹⁴ See, e.g., *Application of GTE Corporation and Bell Atlantic Corporation for Consent to Transfer Control of Domestic and International Sections 214 and 310 Authorizations and Applications to Transfer Control of a Submarine Cable Landing License*, 15 FCC Rcd 14032 (2000) at ¶ 120 (*BA/GTE Merger Order*).

services, by contrast, are highly competitive. AT&T, WorldCom and Sprint are among the largest providers of domestic interstate long distance services to large business customers, with WorldCom serving as both a retail and wholesale provider of these services.¹⁵ The BOCs are also likely to be major competitors for this business once they receive authority to offer in-region long distance throughout their service areas.¹⁶ Enterprise customers currently are served primarily by interexchange carriers, which are best able to serve locations in multiple LATAs – at least until the BOCs are granted authority to provide interLATA services throughout their regions.

2. Incumbent LEC Local Facilities Are a Key Input for All Business Services

Exchange access facilities provide the crucial link between customers' premises and carriers' networks. They are an essential input for all business services, including local exchange service, ordinary voice long distance services, data services such as frame relay, ATM, or Gigabit Ethernet, or Internet access services. One of the key characteristics of the enterprise segment of the business market is that enterprise customers typically require service in multiple locations scattered throughout a city or the nation.¹⁷ To compete effectively for an enterprise customer's business, a carrier must be able to obtain exchange access facilities to all of the customer's locations.

Business services are provided via both switched access services and dedicated facilities.¹⁸ Switched access is used for voice services. Dedicated facilities can be used for either voice or data services; increasingly, carriers are offering "integrated" service

¹⁵ *MCI/WorldCom Merger Order* at ¶ 34.

¹⁶ *Id.*

¹⁷ For example, a bank may require frame relay service that connects many branches to a corporate data center.

¹⁸ As described below in sections II.C. and III.D., WorldCom also serves business customers, including enterprise customers, with DSL services.